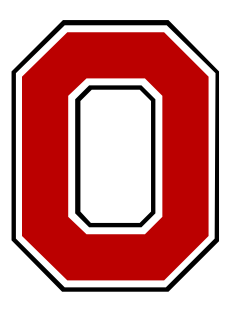


# An Analysis of the Evolution of Impressions of Primary Care Medicine throughout Medical School



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## Introduction

The demand for primary care physicians is projected to grow by almost 17% between 2013 and 2025 while the projected increase in primary care physicians is only expected to be 11% between those years<sup>1</sup>. This could potentially lead to an almost 20,000 physician shortage by 2025. The significance of this rests on the fact that access to primary care providers has a direct and measurable impact on patient care including access as well as morbidity and mortality.

Despite increased medical student enrollment in the United States, there has been a decline in the percentage of residents ultimately entering primary care fields following residency<sup>2,3</sup>. With demand on the rise, it is imperative we determine why interest is falling for outpatient primary care.

If we are able to determine points in training when motivations change, we may be able to alter experiences in medical school to make it more likely for medical students to pursue primary care.

We hypothesized that early in medical training factors such as salary and prestige would be larger deterrents to pursuing this field, while later in training factors such as bureaucracy and monotony of workday would be more influential deterrents. We also hypothesized that the deterrents for those that at one point were, but are no longer interested in primary care are modifiable factors such as work/life balance, bureaucracy, and uncertainty about the future of primary care.

## Study Design

- 183 1st and 4th year medical students from two Ohio medical schools, The Ohio State University College of Medicine and the University of Cincinnati College of Medicine completed a 15-question survey regarding their interest in primary care.
- Questions included basic demographics, interest in primary care during various points in medical school, deterrents to primary care and thoughts on possible changes to increase interest in primary care.
- 4th year students rated their level of interest during their first/second and fourth year, and were divided into four cohorts based on how their interest compared between these two time points: consistently uninterested, consistently interested, gained interest, lost interest.
- Students rated their responses on a 7-point Likert scale scored from -3 to +3, with a negative score more indicative of a negative impression and a positive score more indicative of a positive impression.

## Results

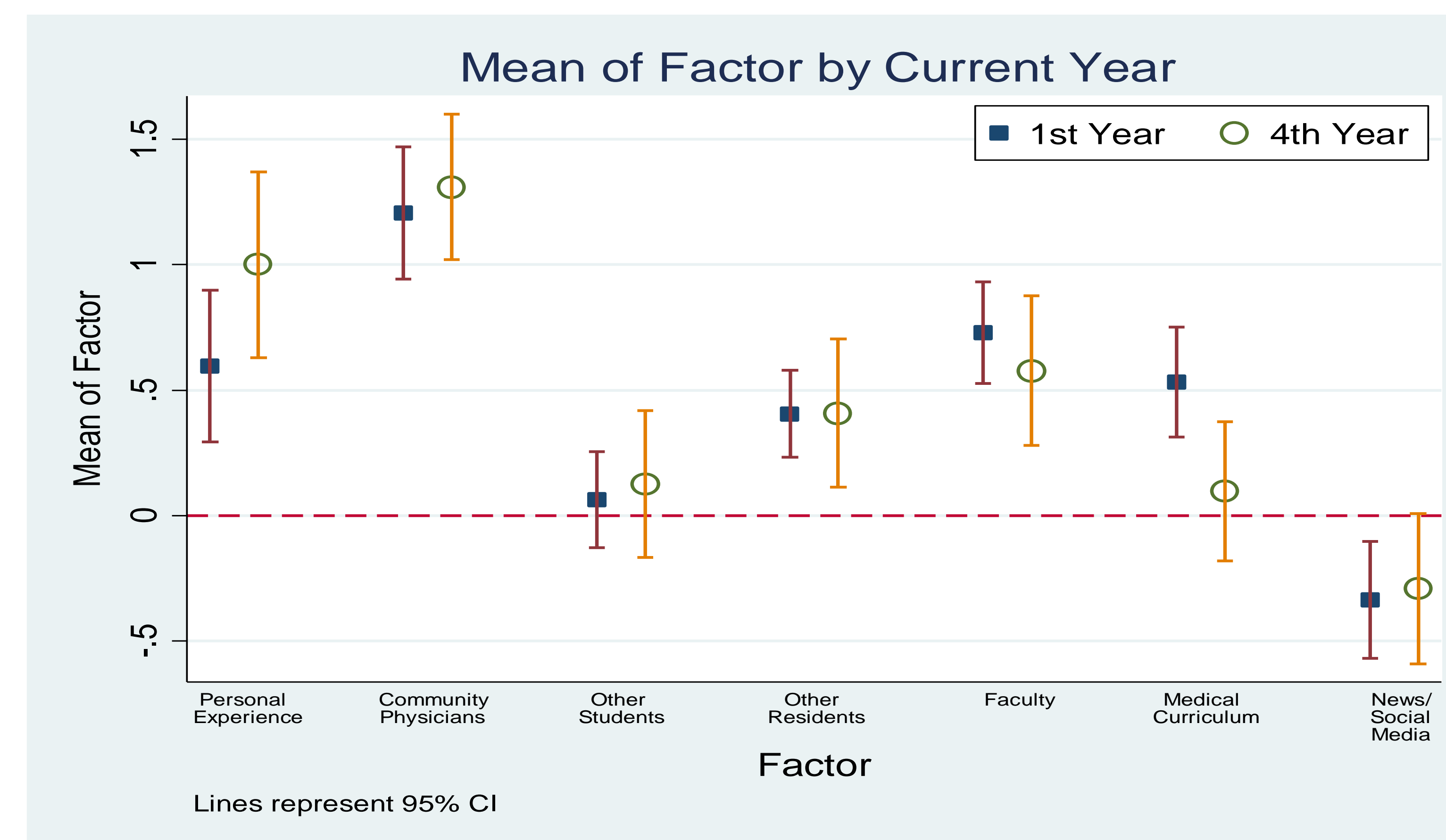


Figure 1. Comparison of factors shaping 1<sup>st</sup> (n=111) versus 4<sup>th</sup> year (n=72) medical students' impressions of primary care.

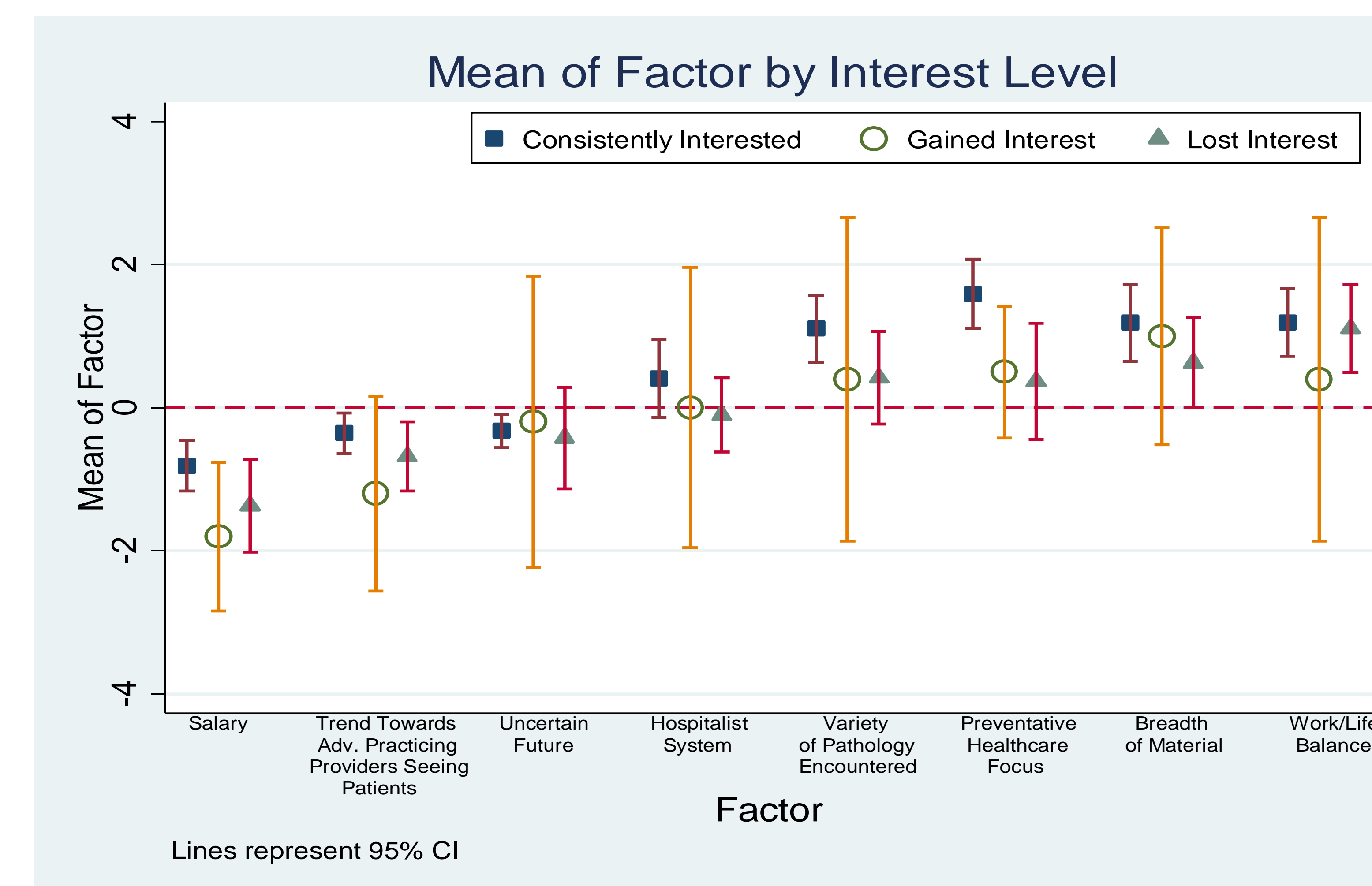


Figure 2. Comparison of factors influencing medical students decision to pursue primary care of three 4<sup>th</sup> year medical student cohorts, consistently interested (n=72), gained interested (n=5), lost interest (n=20).

## Results Continued

- Physicians in the community most positively affected students' impressions, while news and social media most negatively affected students' impressions of primary care.
- The odds of a student being interested in primary care in years one and two were 3.1 times greater than the odds of them being interested in their fourth year (p=0.002; 95% CI: (1.5, 6.6)).
- Looking at fourth year students consistently interested in primary care and those who lost interest variety of pathology encountered (1.11 vs 0.42), preventative healthcare focus (1.59 vs 0.37), and breadth of material (1.19 vs 0.63) appeared to be more negative factors for those who lost interest. Salary was a less negative influence for those who were consistently interested compared to those who lost interest (-0.81 vs -1.37).
- Those students who lost interest were 2.7 times more likely to mark "increased salary" as the primary change that would make them consider primary care (p = 0.08; 95% CI: (0.9, 8.4)).

## Conclusions

Interest in primary care declined as students progressed through medical school. Establishing early mentorship, changing social media messages regarding the value of primary care, and altering financial disparities between primary care and other fields may help to maintain medical students' interest.

## Next Steps

This pilot study was part of a larger study also looking at resident attitudes toward primary care. In the future we hope to do a larger multi-center longitudinal study looking at motivation for and deterrents to primary care for both medical school and residents to further characterize possible changes to increase the primary care workforce.

## References

1. Health Resources and Services Administration Bureau of Health Professions. National Center for Health Workforce Analysis. National and Regional Projections of Supply and Demand for Primary Care Practitioners: 2013-2025. Available at: <https://bhwa.hrsa.gov/sites/default/files/bhw/health-workforce-analysis/research/projections/primary-care-national-projections2013-2025.pdf> Accessed February 5, 2017
2. Garibaldi, R. A., Popkave, C., & Bylsma, W. (2005). Career plans for trainees in internal medicine residency programs. *Academic Medicine : Journal of the Association of American Medical Colleges*, 80(5), 507-512.
3. Colwill JM, Cultice JM, Kruse RL. Will generalist physician supply meet demands of an increasing and aging population? *Health Aff (Millwood)*. 2008;27(3):w232-41.